

NEGATIVE PHOTORESIST COMPOSITION INCLUDING NON-CROSSLINKING CHEMISTRY

Abstract of the Disclosure

A negative photoresist composition and a method of patterning a substrate through use of the negative photoresist composition. The composition includes: a radiation sensitive acid generator; a hydroxy-containing additive; and a resist polymer derived from at least one first monomer. The resist polymer may be further derived from a second monomer having an aqueous base soluble moiety. The hydroxy-containing additive has the structure of Q-OH, where Q may include one or more cyclic structures. Q-OH may have a primary alcohol structure. The acid generator is adapted to generate an acid upon exposure to radiation. The resist polymer is adapted to chemically react with the additive in the presence of the acid to generate a non-crosslinking reaction product that is insoluble in an aqueous alkaline developer solution.